

## CLAIMS

### What is claimed is:

1. A method for reducing the boot time for a computer, comprising the steps for:
  - (a) supplying power to the computer;
  - (b) disabling a plurality of input/output (I/O) devices coupled to the computer;
  - (c) performing a boot process for the computer; and
  - (d) placing the computer in a suspend to memory state, wherein the steps (a) through (d) are performed before a user turns on the computer.

2. The method of claim 1, wherein the supplying step (a) comprises:
  - (a1) supplying power to the computer when the computer is in a powered down state.

3. The method of claim 2, wherein the supplying step (a1) comprises:
  - (a1i) supplying power to the computer by plugging the computer into an AC outlet.

4. The method of claim 1, wherein the performing step (c) comprises:
  - (c1) performing the boot process for the computer by a basic input/output system (BIOS) of the computer; and
  - (c2) setting a flag by the BIOS, wherein setting the flag indicated that the computer is being booted from a powered down state.

1           5.     The method of claim 4, wherein the flag comprises at least one chip set register.

1           6.     The method of claim 1, wherein the placing step (d) comprises:

2           (d1)   checking a flag by an operating system (OS) of the computer, wherein the flag  
3           indicates whether or not the computer is being booted from a powered down  
4           state; and

5           (d2)   placing the computer in the suspend to memory state if the flag indicates that the  
6           computer is being booted from the powered down state.

1           7.     The method of claim 1, wherein the suspend to memory state is an S3 state.

1           8.     The method of claim 1, further comprising:

2           (e)   supplying power to the computer when the computer is in the suspend to memory  
3           state;

4           (f)   resuming operation of an OS of the computer;

5           (g)   checking a flag by the OS, wherein the flag indicates whether or not the computer  
6           is being booted from a powered down state;

7           (h)   enabling the plurality of I/O devices if the flag indicates that the computer is not  
8           being booted form the powered down state; and

9           (i)   operating the computer in a wake state.

1 9. The method of claim 8, further comprising:

2 (j) returning the computer to the suspend to memory state if the computer is being  
3 turned "off".

1 10. The method of claim 9, wherein the returning step (j) comprises:

2 (j1) returning the computer to the suspend to memory state if a power button of the  
3 computer is pressed.

1 11. A method for reducing the boot time for a computer, comprising the steps for:

2 (a) supplying power to the computer;

3 (b) determining if the power is supplied to the computer when the computer is in a  
4 powered down state or a suspend to memory state;

5 (c) booting the computer when the power is supplied to the computer when the  
6 computer is in a powered down state, wherein the booting step (c) comprises:

7 (c1) disabling a plurality of I/O devices coupled to the computer,

8 (c2) performing a boot process for the computer, and

9 (c3) placing the computer in the suspend to memory state; and

10 (d) operating the computer in a wake state if the power is supplied to the computer  
11 when the computer is in the suspend to memory state.

1 12. The method of claim 11, wherein the disabling step (c1) and the performing step  
2 (c2) are performed by a BIOS of the computer, wherein the performing step (c2)  
3 further comprises:

4 (c2i) setting a flag by the BIOS, wherein the flag indicates whether or not the computer  
5 is being booted from the powered down state.

1 13. The method of claim 11, wherein the placing step (c3) is performed by an OS of  
2 the computer, wherein the placing step (c3) comprises:

3 (c3i) checking a flag by the OS, wherein the flag indicates whether or not the computer  
4 is being booted from the powered down state; and

5 (c3ii) placing the computer in the suspend to memory state if the flag indicates that the  
6 computer is being booted from the powered down state.

1 14. The method of claim 12, wherein the flag comprises at least one chip set register.

1 15. The method of claim 11, wherein the operating step (d) comprises:

2 (d1) resuming operation of an OS of the computer;

3 (d2) checking a flag by the OS, wherein the flag indicates whether or not the computer  
4 is being booted from a powered down state;

5 (d3) enabling the plurality of I/O devices if the flag indicates that the computer is not

6 being booted from the powered down state; and

7 (d4) operating the computer in the wake state.

1 16. The method of claim 11, further comprising:

2 (e) returning the computer to the suspend to memory state if a power button of the  
3 computer is pressed.

1 17. A computer readable medium with program instructions for reducing the boot  
2 time for a computer, comprising the instructions for:

- 3 (a) supplying power to the computer;
- 4 (b) disabling a plurality of I/O devices coupled to the computer;
- 5 (c) performing a boot process for the computer; and
- 6 (d) placing the computer in a suspend to memory state, wherein the instructions (a)  
7 through (d) are performed before a user turns on the computer.

1 18. The medium of claim 17, wherein the supplying instruction (a) comprises  
2 instructions for:

3 (a1) supplying power to the computer when the computer is in a powered down state.

1 19. The medium of claim 18, wherein the supplying instruction (a1) comprises  
2 instructions for:  
3 (a1i) supplying power to the computer by plugging the computer into an AC outlet.

1 20. The medium of claim 17, wherein the performing instruction (c) comprises  
2 instructions for:  
3 (c1) performing the boot process for the computer by a basic input/output system  
4 (BIOS) of the computer; and  
5 (c2) setting a flag by the BIOS, wherein setting the flag indicated that the computer is  
6 being booted from a powered down state.

1 21. The medium of claim 20, wherein the flag comprises at least one chip set register.

1 22. The medium of claim 17, wherein the placing instruction (d) comprises  
2 instructions for:  
3 (d1) checking a flag by an operating system (OS) of the computer, wherein the flag  
4 indicates whether or not the computer is being booted from a powered down state; and  
5 (d2) placing the computer in the suspend to memory state if the flag indicates that the  
6 computer is being booted from the powered down state.

1 23. The medium of claim 17, wherein the suspend to memory state is an S3 state.

1 24. The medium of claim 17, further comprising instructions for:

2 (e) supplying power to the computer when the computer is in the suspend to memory  
3 state;

4 (f) resuming operation of an OS of the computer;

5 (g) checking a flag by the OS, wherein the flag indicates whether or not the computer  
6 is being booted from a powered down state;

7 (h) enabling the plurality of I/O devices if the flag indicates that the computer is not  
8 being booted from the powered down state; and

9 (i) operating the computer in a wake state.

1 25. The medium of claim 24, further comprising instructions for:

2 (j) returning the computer to the suspend to memory state if the computer is being  
3 turned "off".

1 26. The medium of claim 25, wherein the returning instruction (j) comprises  
2 instructions for:

3 (j1) returning the computer to the suspend to memory state if a power button of the  
4 computer is pressed.

6 being booted from the powered down state; and

7 (d4) operating the computer in the wake state.

1 16. The method of claim 11, further comprising:

2 (e) returning the computer to the suspend to memory state if a power button of the  
3 computer is pressed.

1 17. A computer readable medium with program instructions for reducing the boot  
2 time for a computer, comprising the instructions for:

- 3 (a) supplying power to the computer;
- 4 (b) disabling a plurality of I/O devices coupled to the computer;
- 5 (c) performing a boot process for the computer; and
- 6 (d) placing the computer in a suspend to memory state, wherein the instructions (a)  
7 through (d) are performed before a user turns on the computer.

1 18. The medium of claim 17, wherein the supplying instruction (a) comprises  
2 instructions for:

- 3 (a1) supplying power to the computer when the computer is in a powered down state.



1 19. The medium of claim 18, wherein the supplying instruction (a1) comprises  
2 instructions for:  
3 (a1i) supplying power to the computer by plugging the computer into an AC outlet.

1 20. The medium of claim 17, wherein the performing instruction (c) comprises  
2 instructions for:  
3 (c1) performing the boot process for the computer by a basic input/output system  
4 (BIOS) of the computer; and  
5 (c2) setting a flag by the BIOS, wherein setting the flag indicated that the computer is  
6 being booted from a powered down state.

1 21. The medium of claim 20, wherein the flag comprises at least one chip set register.

1 22. The medium of claim 17, wherein the placing instruction (d) comprises  
2 instructions for:  
3 (d1) checking a flag by an operating system (OS) of the computer, wherein the flag  
4 indicates whether or not the computer is being booted from a powered down state; and  
5 (d2) placing the computer in the suspend to memory state if the flag indicates that the  
6 computer is being booted from the powered down state.

1 23. The medium of claim 17, wherein the suspend to memory state is an S3 state.

1 24. The medium of claim 17, further comprising instructions for:

2 (e) supplying power to the computer when the computer is in the suspend to memory  
3 state;

4 (f) resuming operation of an OS of the computer;

5 (g) checking a flag by the OS, wherein the flag indicates whether or not the computer  
6 is being booted from a powered down state;

7 (h) enabling the plurality of I/O devices if the flag indicates that the computer is not  
8 being booted from the powered down state; and

9 (i) operating the computer in a wake state.

1 25. The medium of claim 24, further comprising instructions for:

2 (j) returning the computer to the suspend to memory state if the computer is being  
3 turned "off".

1 26. The medium of claim 25, wherein the returning instruction (j) comprises  
2 instructions for:

3 (j1) returning the computer to the suspend to memory state if a power button of the  
4 computer is pressed.

1 27. A computer readable medium with program instructions for reducing the boot  
2 time for a computer, comprising the instructions for:

- 3 (a) supplying power to the computer;
- 4 (b) determining if the power is supplied to the computer when the computer is in a  
5 powered down state or a suspend to memory state;
- 6 (c) booting the computer when the power is supplied to the computer when the  
7 computer is in a powered down state, wherein the booting instruction (c) comprises  
8 instructions for:

- 9 (c1) disabling a plurality of I/O devices coupled to the computer,
- 10 (c2) performing a boot process for the computer, and
- 11 (c3) placing the computer in the suspend to memory state; and
- 12 (d) operating the computer in a wake state if the power is supplied to the computer  
13 when the computer is in the suspend to memory state.

1 28. The medium of claim 27, wherein the disabling instruction (c1) and the  
2 performing instruction (c2) are performed by a BIOS of the computer, wherein the  
3 performing instruction (c2) further comprises instructions for:

- 4 (c2i) setting a flag by the BIOS, wherein the flag indicates whether or not the computer  
5 is being booted from the powered down state.

1 29. The medium of claim 27, wherein the placing instruction (c3) is performed by an  
2 OS of the computer, wherein the placing instruction (c3) comprises instructions for:  
3 (c3i) checking a flag by the OS, wherein the flag indicates whether or not the computer  
4 is being booted from the powered down state; and  
5 (c3ii) placing the computer in the suspend to memory state if the flag indicates that the  
6 computer is being booted from the powered down state.

1 30. The medium of claim 28, wherein the flag comprises at least one chip set register.

1 31. The medium of claim 27, wherein the operating instruction (d) comprises  
2 instructions for:  
3 (d1) resuming operation of an OS of the computer;  
4 (d2) checking a flag by the OS, wherein the flag indicates whether or not the computer  
5 is being booted from a powered down state;  
6 (d3) enabling the plurality of I/O devices if the flag indicates that the computer is not  
7 being booted form the powered down state; and  
8 (d4) operating the computer in the wake state.

1 32. The medium of claim 27, further comprising instructions for:

2 (e) returning the computer to the suspend to memory state if a power button of the  
3 computer is pressed.

1 33. A system, comprising:

2 a plurality of I/O devices; and

3 a computer coupled to the plurality of I/O devices, the computer comprising:

4 a BIOS,

5 a memory, and

6 an OS, wherein when power is supplied to the computer before a user turns on the  
7 computer, the BIOS disables the plurality of I/O devices and performs a boot process for  
8 the computer, and the OS places the computer in a suspend to memory state.

1 34. The system of claim 33, wherein the computer further comprises a register,

2 wherein a state of the register indicates whether or not the computer is being supplied

3 power with the computer being in a powered down state or the suspend to memory state.

1 35. The system of claim 34, wherein if the register indicates that the computer is

2 being supplied power with the computer being in a powered down state, then the OS

3 places the computer in the suspend to memory state.

1           36.     The system of claim 34, wherein if the register indicates that the computer is  
2           being supplied power with the computer being in the suspend to memory state, then the  
3           OS operates the computer in a wake state.